

SERVICE MANUAL

NAD

SERVICE SAFETY PRECAUTIONS (UL)

1. Use exact replacement parts for critical locations marked "⚠".
 2. Return lead dress to original position and re-install protective covers.
 3. Before returning to customer, test for shock hazard; use either method A or B:
- A. Leakage test "cold":
1. Unplug the AC cord; turn power switch ON.
 2. Connect one lead of High Voltage Insulation Tester to both prongs of the AC plug.
 3. Touch other lead to all exposed metal parts.
 4. Impedance measurement must be 0.3-5.0 Megohms.
- B. Leakage test, "live":
1. Plug unit directly into the AC outlet; do not use isolation transformer.
 2. Connect one lead of the Leakage Current Tester to earth ground.
 3. Touch other lead to all exposed metal parts.
 4. Leakage measurement must be less than 0.5 milliamps.

AV316 AMPLIFIER

AV316 AMPLIFIER

SERVICE SAFETY PRECAUTIONS

1. Use exact replacement part for critical locations, marked "A" on parts list.
2. Return lead dress to original position, and re-install protective covers.
3. Before returning to customer, test for shock hazard; use either method A or B:

A. Leakage test, "cold":

1. Unplug AC cord, turn power switch ON.
2. Connect one lead of High Voltage Insulation Tester to both prongs of AC plug.
3. Touch other lead to all exposed metal parts.
4. Impedance measurement must be 0.3 - 5.0 Megohms.

B. Leakage test, "live":

1. Plug unit directly into AC outlet; do not use isolation transformer.
2. Connect one lead of Leakage Current Tester to earth ground.
3. Touch other lead to all exposed metal parts.
4. Leakage measurement must be less than 0.5 milliamperes.

4. Replacing the fuses



This symbol located near the fuse indicates that the fuse used is fast

operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.



Ce symbole indique que le fusible utilise est a rapide.

Pour une protection permanents, n'utiliser que des fusibles de meme type.

Ce dernier est indique la qu le present symbol est appose.

For continued protection against fire hazard, replace with same type fuse.

For fuse rating refer to the marking adjacent to the symbol.

5. To Initialize the unit

This device employs a microprocessor to perform various functions and operations.

If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.

To perform a reset, please follow the procedure below.

1. Press and hold down the CD button, then press the POWER button.
2. Take the power supply cord from the socket while "TEST-" is displayed.
3. After "clear" is displayed, the preset memory and each mode stored in then memory, such as surround, are initialized and will return to the factory settings.

Circuit No.	Part No.	Description
F901	252164Y	5A-UL/T-237, Primary <AH>
F902	252076	3.15A-SE-EAK, Primary <C>
F903	252075	2.5A-SE-EAK, Primary <C>
F921	252156Y	1A-UL/T-237, Secondary <AH>
	252070	1A-SE-EAK, Secondary <C>
F922	252156Y	1A-UL/T-237, Secondary <AH>
	252070	1A-SE-EAK, Secondary <C>

6. Safety-check out

(Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer.

Connect the insulating-resistance tester between the plug of power supply cord and the screw on the back panel.

Specifications : 3.3Mohm \pm 10% at 500V.

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SPECIFICATIONS

AMPLIFIER SECTION

STEREO MODE:

Continuous Power

into 8 Ω 75W

into 4 Ω 75W

Dynamic Power:

into 8 Ω 100W

into 4 Ω 170W

(Min. RMS power per channel, 20Hz-20kHz, both channels driven, with no more than rated distortion)

Front L/R and Center Channels

50W into 8 Ω

Rear Channels

15W per channel into 8 Ω , 1kHz: 0.3% THD

THD 20Hz-20kHz

0.08% (Front) (stereo mode)

IM distortion

0.08% (Front) (stereo mode)

Damping factor

60 at 8 Ω (Front)

Input sensitivity and Impedance:

Phono: 2.5mV, 47k ohms

Line: 150mV, 18k ohms

Video: 1Vp-p, 75 ohms

Output level and Impedance

Tape 1,2 Line Out: 150mV, 2.2k ohms

Video 2 Line Out: 150mV, 2.2k ohms

Pre Out: 1V, 2.2k ohms (Subwoofer)

Video: 1Vp-p, 75 ohms (Video 2, Monitor)

Phono Overload 1kHz, 0.5% THD

120mV RMS

Frequency response 5Hz to 50kHz

± 0.8 dB

RIAA Deviation 20Hz-20kHz

± 0.8 dB

Tone control

Bass: ± 8 dB at 100Hz

Treble: ± 8 dB at 10kHz

Signal/Noise ratio

Phono 80dB (IHF A, 5mV input)

CD/Tape: 100dB (IHF A)

Muting:

-40dB

Remote Control

Power, Master Volume Up/Down, Mute, Sleep, Surround Mode, Delay Time, Test Tone, Center Volume Up/Down,

Rear Volume, Up/Down, Input Selector (CD, Phono, Tuner, Tape 1, Tape 2, Video 1, Video 2)

Deck A/B, (Play, Reverse Play, Stop, Record/Pause, Fast Forward, Rewind)

CD: (Play, Pause, Stop, Disc, Skip Forward/Back)

Tuner: (Bank, Preset Up/Down)

Physical Specification

Dimensions in mm (WxHxD)

435 x 145 x 330

Net weight

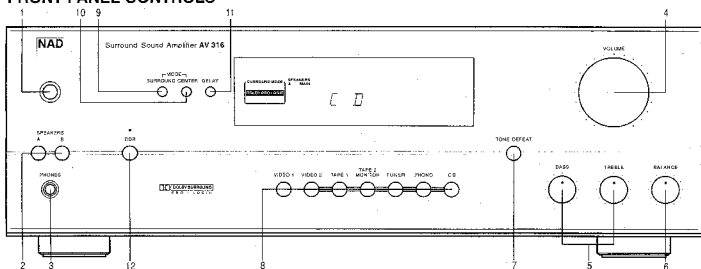
9.6kg

Shipping weight

10.7kg

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

FRONT PANEL CONTROLS



- | | | |
|---------------------|--|-------------|
| 1. POWER | 5. BASS & TREBLE CONTROLS | 9. SURROUND |
| 2. SPEAKERS A B | 6. BALANCE | 10. CENTER |
| 3. HEADPHONE SOCKET | 7. TONE DEFEAT | 11. DELAY |
| 4. VOLUME | 8. VIDEO 1, VIDEO 2, TAPE 1, TAPE 2 MONITOR, TUNER, CD | 12. CDR |

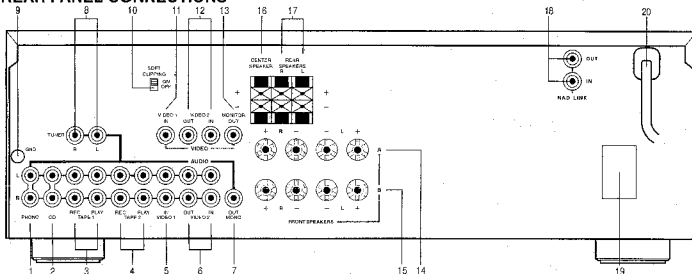


The lightning flash with arrowhead, within an equilateral triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.



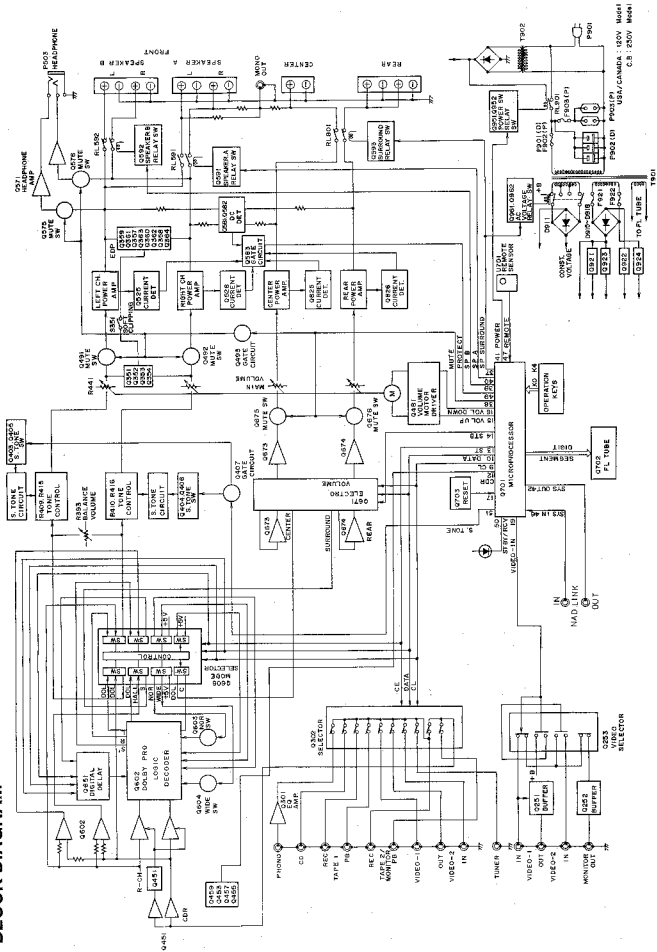
The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

REAR PANEL CONNECTIONS

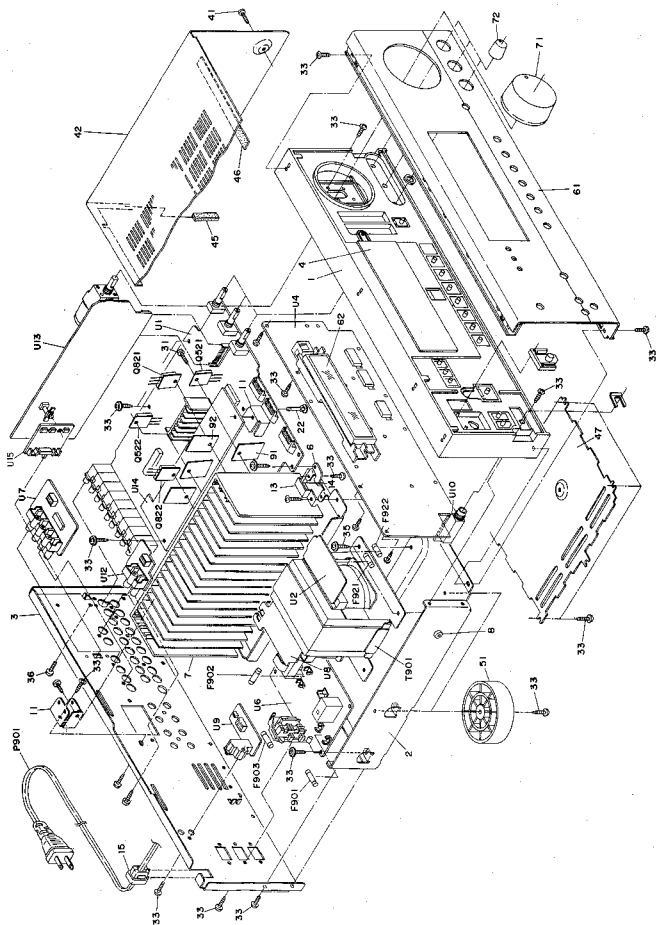


- | | | |
|----------------|--------------------------|--|
| 1. PHONO INPUT | 8. TUNER | 15. FRONT SPEAKERS B |
| 2. CD INPUT | 9. GROUND TERMINAL | 16. CENTER SPEAKER |
| 3. TAPE 1 | 10. SOFT CLIPPING | 17. REAR SPEAKERS |
| 4. TAPE 2 | 11. VIDEO 1 | 18. NAD-LINK IN OUT |
| 5. VIDEO 1 | 12. VIDEO 2 | 19. AC OUTLETS (EUROPEAN AND US VERSIONS ONLY) |
| 6. VIDEO 2 | 13. MONITOR VIDEO OUTPUT | 20. AC POWER CORD CONNECTOR |
| 7. MONO OUT | 14. FRONT SPEAKERS A | |

BLOCK DIAGRAM



EXPLODED VIEW



PARTS LIST

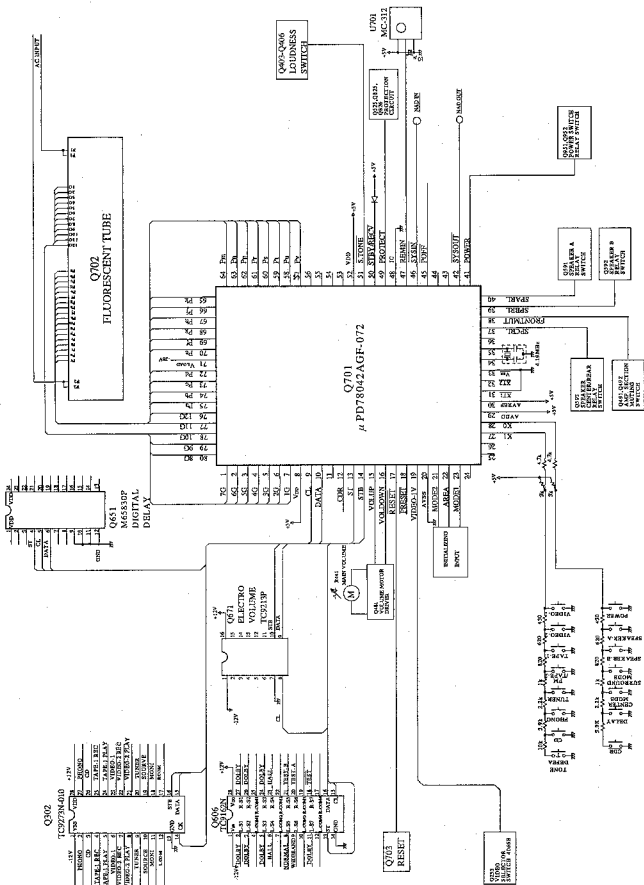
REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
1	2710872Y	Front bracket	P504	256004-4	NANWIA-5*14	U2	1A600597-4Y	NAETC-5397-4, Power secondary supply circuit pe board ass'y <AH>
2	2710298AY	Chassis	P901	23319HT or 23319AHARY	AS-UC-6*18 or AS-UC-6*18		1A600597-4Y	NAETC-5397-4A, Power secondary supply circuit pe board ass'y <C>
3	2712096AY	Rear panel <AH>		23319AHARY	AS-UC-6*18, Power supply cord <AH>	U4	1A600567-1Y	NADIS-5467-1, Display circuit pe board ass'y <AH>
4	2712097AY	Rear panel <C>		23319HT	AS-CBE-2, Power supply cord <C>	U6	1A600567-1Y	NADIS-5467-1A, Display circuit pe board ass'y <C>
5	2712104AY	Rear panel 		23319HT	AS-RS, Power supply cord 		1A600569-1Y	NAPS-5469-1, Power primary supply circuit pe board ass'y <AH>
6	2710372Y	Bracket H	P901	23319HT	AS-SAA, Power supply cord 		1A600569-1Y	NAPS-5469-1A, Power primary supply circuit pe board ass'y <C>
7	2710390Y	Relator <AH>	P902	232164Y	3A-ULT-237, Primary fuse <AH>		1A600569-1Y	NAPS-5469-1B, Power primary supply circuit pe board ass'y
8	2710391Y	Relator <C>	P903	232076	31SA-SE-EAK, Primary fuse <C>	U7	1A600570-1Y	NAETC-5470-1, Video circuit pe board ass'y
9	2710392Y	Relator H	P903	232075	23A-SE-EAK, Primary fuse <C>	U8	1A600571-1Y	NAETC-5471-1, Primary circuit pe board ass'y
10	2710393Y	Relator H, H2	P921	232156Y	1A-ULT-237, Secondary fuse <AH>	U9	1A600572-1Y	NAETC-5472-1, NAP LINK terminal pe board ass'y
11	2710394Y	Relator	P922	232156Y	1A-SE-EAK, Secondary fuse <C>	U10	1A600573-1Y	NAETC-5473-1, Headphone terminal pe board ass'y <AH>
12	2710395Y	Cord bracket, #2271		232070	1A-ULT-237, Secondary fuse <AH>		1A600573-1Y	NAETC-5473-1A, Headphone terminal pe board ass'y <C>
13	2710396Y	Plastic rivet, #2271	Q321,522	232073 or 232074	1A-SE-EAK, Secondary fuse <C>	U12	1A600575-1Y	NAETC-5475-1, Tuner terminal pe board ass'y <AH>
14	2710397Y	HOLD-14RF, Holder	Q322,524	232073 or 232074	25C3380-O or 25C3380-O	U13	1A600575-1Y	NAETC-5475-1A, Tuner terminal pe board ass'y <C>
15	2710398Y	Holder	Q323,524	232073 or 232074	25C3381-O, Power amplifier transistor	U14	1A600576-1Y	NAAE-5476-1, Surround circuit pe board ass'y
16	2710399Y	3MSW-3W-148(B/C), Semi screw	Q324,524	232073 or 232074	25A1943-O or 25A1943-O		1A600577-1Y	NAAE-5477-1, Center and rear amplifier circuit pe board ass'y <AH>
17	2710400Y	3TTB-43, Self-tapping screw	Q325,524	232073 or 232074	25C3197-O or 25C3197-O		1A600577-1Y	NAAE-5477-1A, Center and rear amplifier circuit pe board ass'y <C>
18	2710401Y	4TTB-43(B/C), Self-tapping screw	Q326,524	232073 or 232074	25C3198-O or 25C3198-O	U15	1A600578-1Y	NAETC-5478-1, BDP circuit pe board ass'y
19	2710402Y	3TTB-43(B/C), Self-tapping screw	Q327,524	232073 or 232074	25C3199-O or 25C3199-O			
20	2710403Y	Top cover	Q328,524	232073 or 232074	25C3199-O or 25C3199-O			
21	2710404Y	Cushion, 45x50	Q329,524	232073 or 232074	25C3199-O or 25C3199-O			
22	2710405Y	Cushion, 48x10x20	Q330,524	232073 or 232074	25C3199-O or 25C3199-O			
23	2710406Y	Cushion, 48x10x20	Q331,524	232073 or 232074	25C3199-O or 25C3199-O			
24	2710407Y	Cushion, 48x10x20	Q332,524	232073 or 232074	25C3199-O or 25C3199-O			
25	2710408Y	Cushion, 48x10x20	Q333,524	232073 or 232074	25C3199-O or 25C3199-O			
26	2710409Y	Cushion, 48x10x20	Q334,524	232073 or 232074	25C3199-O or 25C3199-O			
27	2710410Y	Cushion, 48x10x20	Q335,524	232073 or 232074	25C3199-O or 25C3199-O			
28	2710411Y	Cushion, 48x10x20	Q336,524	232073 or 232074	25C3199-O or 25C3199-O			
29	2710412Y	Cushion, 48x10x20	Q337,524	232073 or 232074	25C3199-O or 25C3199-O			
30	2710413Y	Cushion, 48x10x20	Q338,524	232073 or 232074	25C3199-O or 25C3199-O			
31	2710414Y	Cushion, 48x10x20	Q339,524	232073 or 232074	25C3199-O or 25C3199-O			
32	2710415Y	Cushion, 48x10x20	Q340,524	232073 or 232074	25C3199-O or 25C3199-O			
33	2710416Y	Cushion, 48x10x20	Q341,524	232073 or 232074	25C3199-O or 25C3199-O			
34	2710417Y	Cushion, 48x10x20	Q342,524	232073 or 232074	25C3199-O or 25C3199-O			
35	2710418Y	Cushion, 48x10x20	Q343,524	232073 or 232074	25C3199-O or 25C3199-O			
36	2710419Y	Cushion, 48x10x20	Q344,524	232073 or 232074	25C3199-O or 25C3199-O			
37	2710420Y	Cushion, 48x10x20	Q345,524	232073 or 232074	25C3199-O or 25C3199-O			
38	2710421Y	Cushion, 48x10x20	Q346,524	232073 or 232074	25C3199-O or 25C3199-O			
39	2710422Y	Cushion, 48x10x20	Q347,524	232073 or 232074	25C3199-O or 25C3199-O			
40	2710423Y	Cushion, 48x10x20	Q348,524	232073 or 232074	25C3199-O or 25C3199-O			
41	2710424Y	Cushion, 48x10x20	Q349,524	232073 or 232074	25C3199-O or 25C3199-O			
42	2710425Y	Cushion, 48x10x20	Q350,524	232073 or 232074	25C3199-O or 25C3199-O			
43	2710426Y	Cushion, 48x10x20	Q351,524	232073 or 232074	25C3199-O or 25C3199-O			
44	2710427Y	Cushion, 48x10x20	Q352,524	232073 or 232074	25C3199-O or 25C3199-O			
45	2710428Y	Cushion, 48x10x20	Q353,524	232073 or 232074	25C3199-O or 25C3199-O			
46	2710429Y	Cushion, 48x10x20	Q354,524	232073 or 232074	25C3199-O or 25C3199-O			
47	2710430Y	Cushion, 48x10x20	Q355,524	232073 or 232074	25C3199-O or 25C3199-O			
48	2710431Y	Cushion, 48x10x20	Q356,524	232073 or 232074	25C3199-O or 25C3199-O			
49	2710432Y	Cushion, 48x10x20	Q357,524	232073 or 232074	25C3199-O or 25C3199-O			
50	2710433Y	Cushion, 48x10x20	Q358,524	232073 or 232074	25C3199-O or 25C3199-O			
51	2710434Y	Cushion, 48x10x20	Q359,524	232073 or 232074	25C3199-O or 25C3199-O			
52	2710435Y	Cushion, 48x10x20	Q360,524	232073 or 232074	25C3199-O or 25C3199-O			
53	2710436Y	Cushion, 48x10x20	Q361,524	232073 or 232074	25C3199-O or 25C3199-O			
54	2710437Y	Cushion, 48x10x20	Q362,524	232073 or 232074	25C3199-O or 25C3199-O			
55	2710438Y	Cushion, 48x10x20	Q363,524	232073 or 232074	25C3199-O or 25C3199-O			
56	2710439Y	Cushion, 48x10x20	Q364,524	232073 or 232074	25C3199-O or 25C3199-O			
57	2710440Y	Cushion, 48x10x20	Q365,524	232073 or 232074	25C3199-O or 25C3199-O			
58	2710441Y	Cushion, 48x10x20	Q366,524	232073 or 232074	25C3199-O or 25C3199-O			
59	2710442Y	Cushion, 48x10x20	Q367,524	232073 or 232074	25C3199-O or 25C3199-O			
60	2710443Y	Cushion, 48x10x20	Q368,524	232073 or 232074	25C3199-O or 25C3199-O			
61	2710444Y	Cushion, 48x10x20	Q369,524	232073 or 232074	25C3199-O or 25C3199-O			
62	2710445Y	Cushion, 48x10x20	Q370,524	232073 or 232074	25C3199-O or 25C3199-O			
63	2710446Y	Cushion, 48x10x20	Q371,524	232073 or 232074	25C3199-O or 25C3199-O			
64	2710447Y	Cushion, 48x10x20	Q372,524	232073 or 232074	25C3199-O or 25C3199-O			
65	2710448Y	Cushion, 48x10x20	Q373,524	232073 or 232074	25C3199-O or 25C3199-O			
66	2710449Y	Cushion, 48x10x20	Q374,524	232073 or 232074	25C3199-O or 25C3199-O			
67	2710450Y	Cushion, 48x10x20	Q375,524	232073 or 232074	25C3199-O or 25C3199-O			
68	2710451Y	Cushion, 48x10x20	Q376,524	232073 or 232074	25C3199-O or 25C3199-O			
69	2710452Y	Cushion, 48x10x20	Q377,524	232073 or 232074	25C3199-O or 25C3199-O			
70	2710453Y	Cushion, 48x10x20	Q378,524	232073 or 232074	25C3199-O or 25C3199-O			
71	2710454Y	Cushion, 48x10x20	Q379,524	232073 or 232074	25C3199-O or 25C3199-O			
72	2710455Y	Cushion, 48x10x20	Q380,524	232073 or 232074	25C3199-O or 25C3199-O			
73	2710456Y	Cushion, 48x10x20	Q381,524	232073 or 232074	25C3199-O or 25C3199-O			
74	2710457Y	Cushion, 48x10x20	Q382,524	232073 or 232074	25C3199-O or 25C3199-O			
75	2710458Y	Cushion, 48x10x20	Q383,524	232073 or 232074	25C3199-O or 25C3199-O			
76	2710459Y	Cushion, 48x10x20	Q384,524	232073 or 232074	25C3199-O or 25C3199-O			
77	2710460Y	Cushion, 48x10x20	Q385,524	232073 or 232074	25C3199-O or 25C3199-O			
78	2710461Y	Cushion, 48x10x20	Q386,524	232073 or 232074	25C3199-O or 25C3199-O			
79	2710462Y	Cushion, 48x10x20	Q387,524	232073 or 232074	25C3199-O or 25C3199-O			
80	2710463Y	Cushion, 48x10x20	Q388,524	232073 or 232074	25C3199-O or 25C3199-O			
81	2710464Y	Cushion, 48x10x20	Q389,524	232073 or 232074	25C3199-O or 25C3199-O			
82	2710465Y	Cushion, 48x10x20	Q390,524	232073 or 232074	25C3199-O or 25C3199-O			
83	2710466Y	Cushion, 48x10x20	Q391,524	232073 or 232074	25C3199-O or 25C3199-O			
84	2710467Y	Cushion, 48x10x20	Q392,524	232073 or 232074	25C3199-O or 25C3199-O			
85	2710468Y	Cushion, 48x10x20	Q393,524	232073 or 232074	25C3199-O or 25C3199-O			
86	2710469Y	Cushion, 48x10x20	Q394,524	232073 or 232074	25C3199-O or 25C3199-O			
87	2710470Y	Cushion, 48x10x20	Q395,524	232073 or 232074	25C3199-O or 25C3199-O			
88	2710471Y	Cushion, 48x10x20	Q396,524	232073 or 232074	25C3199-O or 25C3199-O			
89	2710472Y	Cushion, 48x10x20	Q397,524	232073 or 232074	25C3199-O or 25C3199-O			
90	2710473Y	Cushion, 48x10x20	Q398,524	232073 or 232074	25C3199-O or 25C3199-O			
91	2710474Y	Cushion, 48x10x20	Q399,524	232073 or 232074	25C3199-O or 25C3199-O			
92	2710475Y	Cushion, 48x10x20	Q400,524	232073 or 232074	25C3199-O or 25C3199-O			
93	2710476Y	Cushion, 48x10x20	Q401,524	232073 or 232074	25C3199-O or 25C3199-O			
94	2710477Y	Cushion, 48x10x20	Q402,524	232073 or 232074	25C3199-O or 25C3199-O			
95	2710478Y	Cushion, 48x10x20	Q403,524	232073 or 232074	25C3199-O or 25C3199-O			
96	2710479Y	Cushion, 48x10x20	Q404,524	232073 or 232074	25C3199-O or 25C3199-O			
97	2710480Y	Cushion, 48x10x20	Q405,524	232073 or 232074	25C3199-O or 25C3199-O			
98	2710481Y	Cushion, 48x10x20	Q406,524	232073 or 232074	25C3199-O or 25C3199-O			
99	2710482Y	Cushion, 48x10x20	Q407,524	232073 or 232074	25C3199-O or 25C3199-O			
100	2710483Y	Cushion, 48x10x20	Q408,524	232073 or 232074	25C3199-O or 25C3199-O			

NOTE: <AH>: U.S.A., Canadian model only
: U.K. model only
<B1>: Australian model only
<C>: European model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

CAUTION: Replacement for transistor of mark "A", if necessary, must be made from the same base group (HFT) as the original type.

MICROPROCESSOR-CONNECTION DIAGRAM



MICROPROCESSOR TERMINAL DESCRIPTION

Q701: # PD78042AGF-072

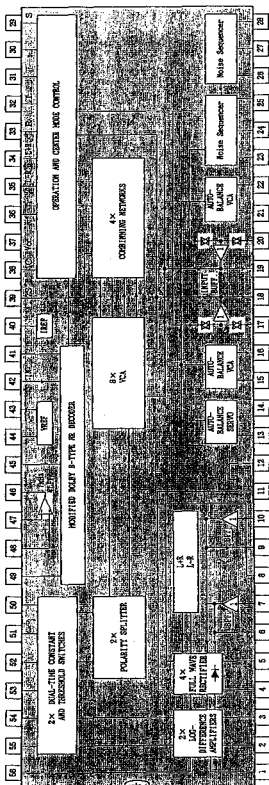
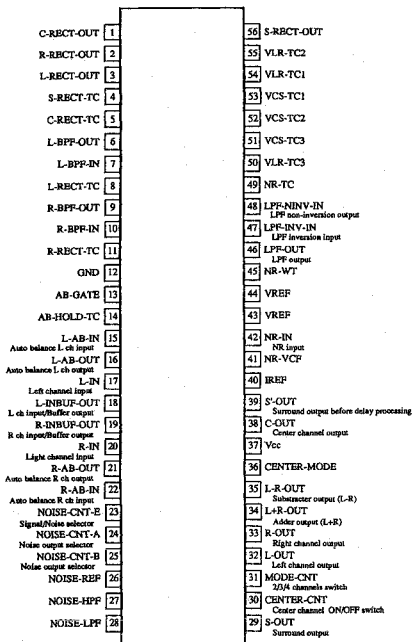
Pin No.	Function	I/O	Description
17	TG1G	O	Grid control output pin. On at the high level.
8	VDD		Power supply pin (+5V)
9	CL	O	Clock output pin. Connect to the terminals CK of function switch Q302, surround mode switch Q606, electro volume Q671 and digital delay Q651.
10	DATA	O	Data output pin. Connect to the terminals DATA of function switch Q302, surround mode switch Q606, electro volume Q671 and digital delay Q651.
11	PLL		Not used.
12	CDR	O	Chip enable output pin for Q459.
13	ST	O	Chip enable output pin. Connect to the terminals ST of function switch Q302, surround mode switch Q606, electro volume Q671 and digital delay Q651.
14	STB	O	Chip enable output pin for electro volume Q671.
15	VOLUP	O	Volume control output pin. Volume up
16	VOLDOWN	O	Volume control output pin. Volume down (Refer table 1.)
17	RESET	I	System reset input pin
18	PRESET		Not used.
19	VIDEO IN	O	Video input selector output pin.
20	AVSS		Ground pin of A/D converter
21	MODE 2	I	Initializing input of operation mode
22	AREA	I	Initializing input of area region
23	MODE1	I	Initializing input of operation mode
24	K4	I	Not used.
25	K3	I	Not used.
26	K2	I	Not used.
27	K1	I	Operation key connection pin
28	K0	I	Operation key connection pin
29	AVDD		Analogous power supply of A/D converter
30	AVREF		Reference voltage input pin of A/D converter
31	XT1		Crystal connection pin for sub system clock resonator
32	XT2		Not used.
33	VSS		Ground pin
34	X1		Resonator connection terminal for main system clock
35	X2		Connect the ceramic resonator 4.19MHz.
36	TUMUT	O	Not used.
37	SPCRL	O	Relay control pin for speaker.
38	FRONT MUT	O	Muting output pin for amplifier section
39	SPBRL	O	Relay control pin for speaker.
40	SPARL	O	Relay control pin for speaker
41	PW	O	Power source control output pin
42	SYSOUT	O	System code output pin. (NAD OUT)
43	RDSDATA		Not used.
44	RDSCLK		Not used.
45	POFF	I	Power stoppage detector input pin
46	SYSIN	I	System code input pin (NAD IN)
47	REMIN	I	Remote control signal input pin
48	IC		Internal connection pin. Connect to the ground terminal.
49	PROTECT	I	Detector input pin of protection circuit. H:On
50	STBY/RECV	O	Stand-by and received indicator output pin
51	STONE/TONE	O	Tone defeat control output pin.
52	VDD		Power supply pin (+5V)
53	STEREO		Not used.
54	SD		Not used.
55	RDS SIG		Not used.
56	RFIN		Not used.
37-70	PVPE	O	Segment output pins. On at the high level.
71	VLOAD	I	Pull-down resistor connection pin of controller and driver of FL.
72-75	PD/PA	O	Segment output pins. On at the high level.
76-80	I2G/SG	O	Grid control output pin. On at the high level.

Operation	#15	#16
VOLUME UP	H	L
VOLUME DOWN	L	H
STOP	H	H

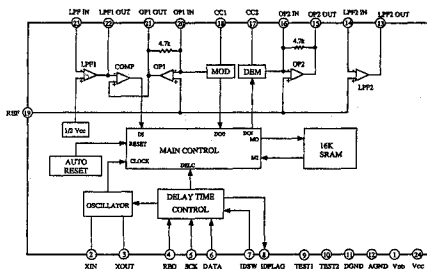
Table 1

IC BLOCK DIAGRAM AND DESCRIPTIONS

Q602: NJM2177L / M69032P (Dolby Pro Logic)

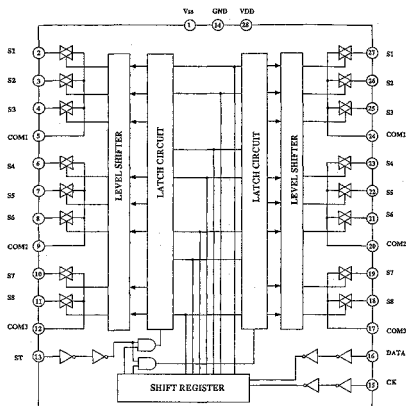


Q651: NJU9701D / M65830P (Digital Delay)

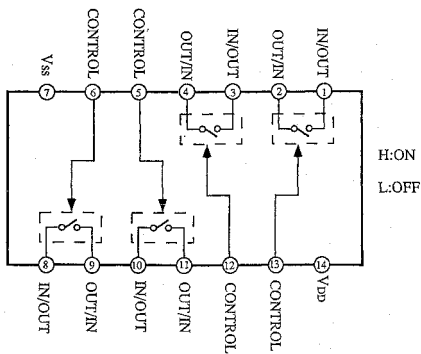


Pin No.	Mark	Function	I/O	Description
1	VDD	Digital power supply	-	
2	XIN	Resonator input	I	Connect the 2MHz ceramic resonator
3	XOUT	Resonator output	O	
4	REQ	Request	I	Data request input
5	SCK	Shift clock	I	Serial data shift clock input
6	DATA	Data	I	Serial data input
7	IDSW	ID switch	I	External input of 4th bit of ID code
8	IDFLAG	ID flag	O	Data input confirmation pulse and serial data output
9	TEST1	Test 1	-	Normal mode when low level
10	TEST2	Test 2	-	Normal mode when low level
11	D GND	Digital ground	-	
12	A GND	Analog ground	-	
13	LFPF2 OUT	LFPF filter 2 output	O	
14	LFPF2 IN	LFPF filter 2 input	I	
15	OP2 OUT	Operation amp. 2 output	O	
16	OP2 IN	Operation amp. 2 input	I	
17	CC2	Current control 2	-	Demodulation ADM control
18	CC1	Current control 1	-	Modulation ADM control
19	REF	Reference	-	Analog reference voltage=1/2VCC
20	OP1 IN	Operation amp. 1 input	I	
21	OP1 OUT	Operation amp. 1 output	O	
22	LFPF1 OUT	LFPF filter 1 output	O	
23	LFPF1 IN	LFPF filter 1 input	I	
24	VCC	Analog power supply	-	

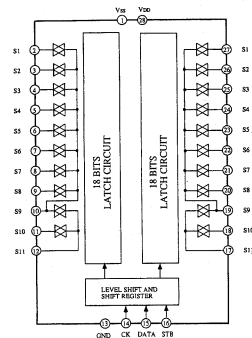
Q606: TC9162N / NJU7311L (Function Switch)



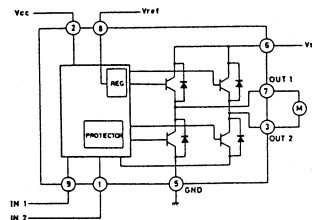
Q253: 4066B (Analog Switch)



Q302: TC9273N-010 (Function Switch)



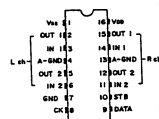
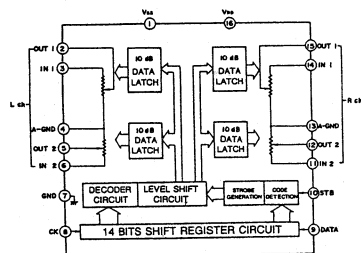
Q481: TA7291S (Volume driver)



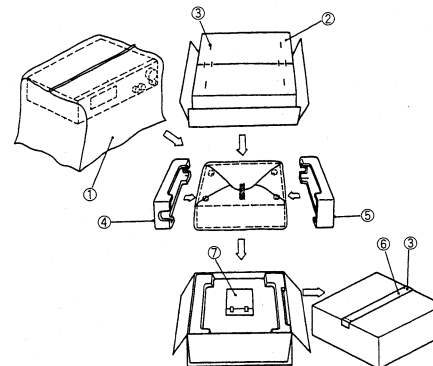
INPUT		OUTPUT		MODE
IN 1	IN 2	OUT 1	OUT 2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

CCW: Counter clockwise direction
CW: Clockwise direction

Q671: TC9213P (Electro Volume)



PACKING VIEW



PACKING PARTS LIST

REF.NO. PART NO.

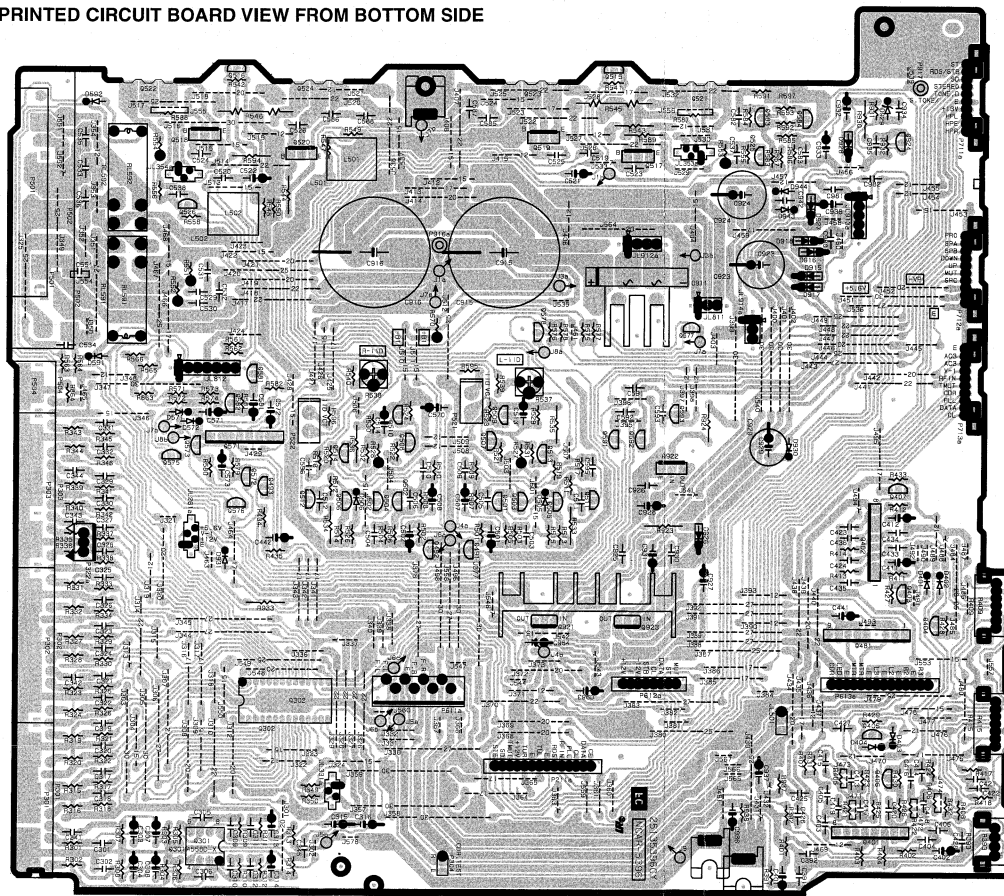
1	29100034-1Y	Styren bag, 850x650
2	29052900AY	Carton Box
3	282321 or 282301	Staple
4	29091694Y	Pad, L
5	29091695Y	Pad, R
6	29110071 or 29110098	PP tape, W=50

DESCRIPTION

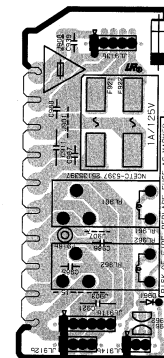
7	Accessory bag ass'y	
29100097-1Y	Styren bag, 350x250	
24140300Y	RC-300S, Remote control transmitter	
3010194	UM-3, Two batteries	
29342165Y	Instruction manual, U6	
2010317Y	Remote control cable, NAD LINK	
29355233Y	Instruction sheet <AH>	
29365043Y	Warranty card <B1>	
29360778Y	Label, Flash <AH>	
29361573Y	Label, PE-LD <C>	
29361759Y	Label, UL/C-UL <AH>	
29361573Y	Label, PE-LD <C>	

NOTE: <AH>: U.S.A., Canadian model only
: U.K. model only
<B1>: Australian model only
<C>: European model only

PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



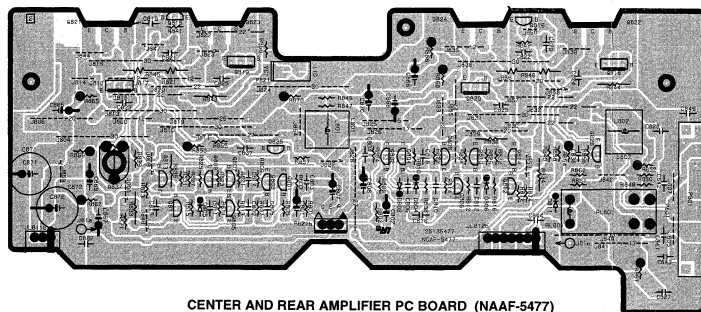
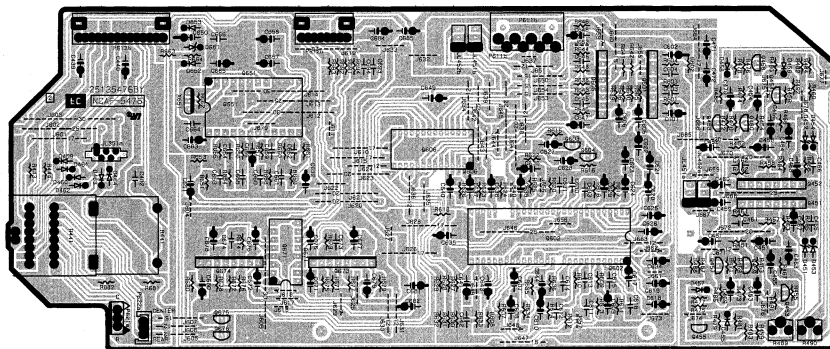
MAIN CIRCUIT PC BOARD (NAAR-5396)



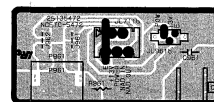
POWER SECONDARY SUPPLY CIRCUIT
PC BOARD (NAETC-5397)

PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE

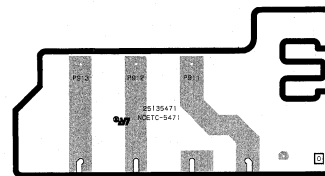
SURROUND CIRCUIT PC BOARD (NAAF-5476)



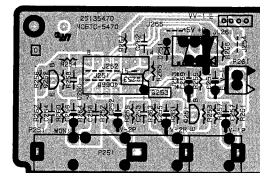
CENTER AND REAR AMPLIFIER PC BOARD (NAAF-5477)



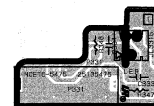
NADLINK TERMINAL PC BOARD
(NAETC-5472)



PRIMARY CIRCUIT PC BOARD
(NAETC-5471)



VIDEO CIRCUIT PC BOARD
(NAETC-5470)

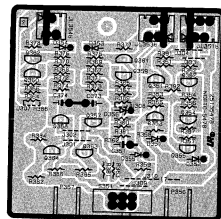
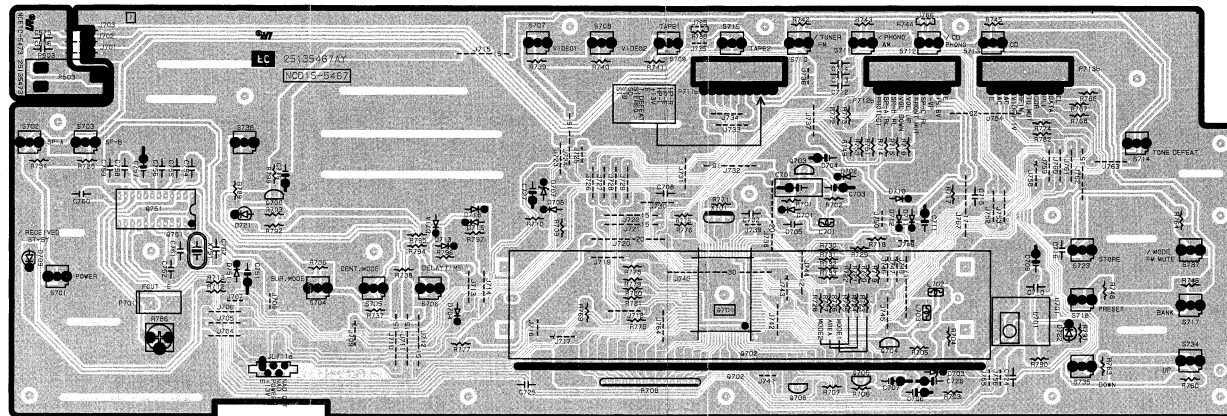


TUNER TERMINAL CIRCUIT PC BOARD
(NAETC-5475)

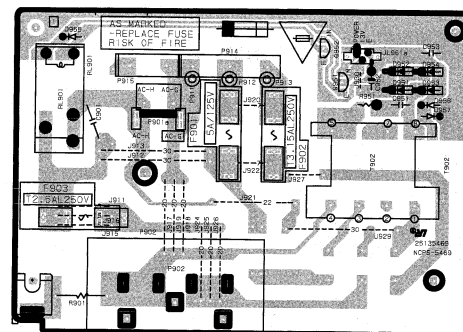
PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE

HEADPHONE TERMINAL PC BOARD
(NAETC-5473)

DISPLAY CIRCUIT PC BOARD (NADIS-5467)

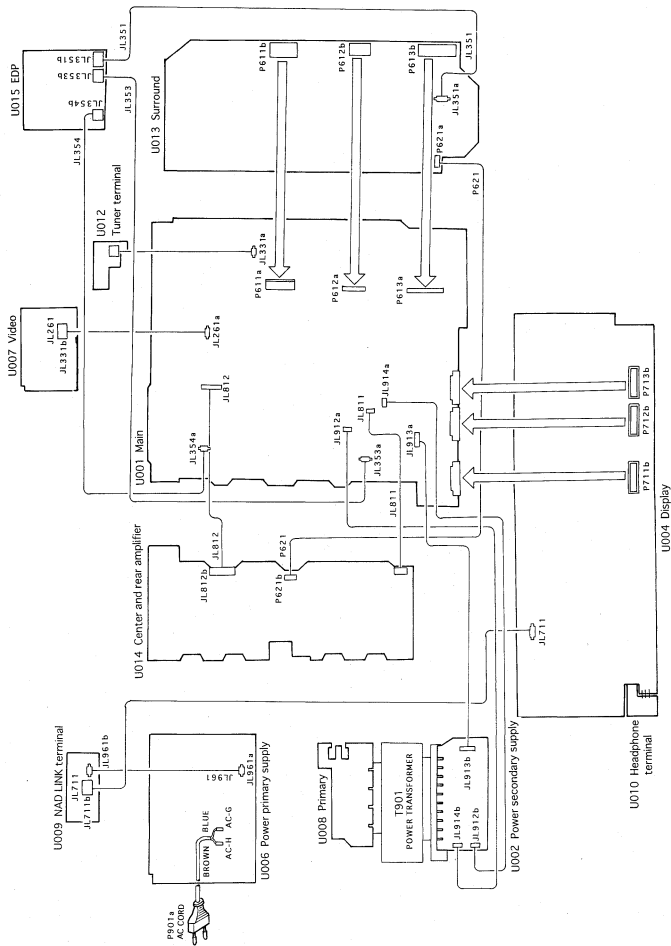


EDP CIRCUIT PC BOARD (NAETC-5478)



POWER PRIMARY SUPPLY CIRCUIT PC BOARD
(NAPS-5469)

WIRING DIAGRAM



PRINTED CIRCUIT BOARD-PARTS LIST

MAIN CIRCUIT PC BOARD (NAAR-5396-4/4A)

CIRCUIT NO. PART NO. DESCRIPTION

ICs		
Q301	222502	NJM4558D-X
Q302	22240881	TC9273N-010
Q401, Q402	22240247 or	BA15218N or
	22240293	NJM4558L-D
Q481	22240239	TA7291S
Q571	22240752	NJM4556L
Q921	222780125NEC	MPC78M12AHF
Q922	222790125	79M12HF
Q923	222780565JRC	NJM78M56FA

Transistors		
Q403-Q406	2211945	2SK246-GR
Q407	2213510	DTA114ES
Q491, Q492	2213631 or	RN1241-A or
	2213632	RN1241-B
Q493	2213510	DTA114ES
Q501-Q504	2211733 or	2SC1845-E or
	2211732	2SC1845-F
Q505, Q506	2213354	2SA933S-R
Q507, Q508	2211733 or	2SC1845-E or
	2211732	2SC1845-F
Q509, Q510	2213284	2SC1740S-R
Q511, Q512	2211353 or	2SA949-O or
	2211354	2SA949-Y
Q513, Q514	2211635 or	2SC2229-O or
	2211634	2SC2229-Y
Q515, Q516	2213284	2SC1740S-R
Q517, Q518	2203010 or	2SC5171 or
	2202034	2SD1763A-D
Q519, Q520	2203000 or	2SA1930 or
	2202024	2SB1186A-D
Q525, Q526	2211633 or	2SC2229-O or
	2211634	2SC2229-Y
Q572	221282	DTC144ES
Q573	2211164	2SC2120-Y
Q575-Q576	2213631 or	RN1241-A or
	2213632	RN1241-B
Q581, Q582	2211733 or	2SC1845-E or
	2211732	2SC1845-F
Q583	2211792 or	2SA992-F or
	2211793	2SA992-E
Q584	2213284	2SC1740S-R
Q924	2211455	2SA1015-GR
Q591-Q593	2213640	DTC123JS

Diodes		
D401-Q404	223163	1SS133
D505, D506	223163	1SS133
D571, D572	223163	1SS133
D591, D592	223163	1SS133
D911	22380038	RBV602
D915-D918	22380032	1SR139-100
D926-D928	22380032	1SR139-100
D929	224473304	MTZJ33D
D930, D931	223163	1SS133
Coils		
L501, L502	231176S	S-13C
Capacitors		
C303, C304	354741009	10 μ F, 16V, Elect.
C307, C308	354721019	100 μ F, 6.3V, Elect.
C309, C310	374726224	6200pF, \pm 5%, 50V, Plastic
C311, C312	374721824	1800pF, \pm 5%, 50V, Plastic
C313-C316	354741009	10 μ F, 16V, Elect.
C391, C392	374721015	100pF, \pm 10%, 50V, Plastic
C401, C402	354741009	10 μ F, 16V, Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
C411, C412	354741009	10 μ F, 16V, Elect.
C427, C428	374721534	0.015 μ F, \pm 5%, 50V, Plastic
C433, C434	374721534	0.015 μ F, \pm 5%, 50V, Plastic
C435, C436	374721015	100pF, \pm 10%, 50V, Plastic
C441	354721019	100 μ F, 6.3V, Elect.
C442	354780109	1 μ F, 50V, Elect.
C501, C502	354741009	10 μ F, 16V, Elect.
C503, C504	374721015	100pF, \pm 10%, 50V, Plastic
C507, C508	354724719	470 μ F, 6.3V, Elect.
C513, C514	354722219	220 μ F, 6.3V, Elect.
C521, C522	354772209	22 μ F, 63V, Elect.
C529-C532	374721044	0.01 μ F, \pm 5%, 50V, Plastic
C570	354791019	100 μ F, 100V, Elect.
C571-C573	354741009 or	10 μ F, 16V, Elect.
	355741009	10 μ F, 16V, Elect.
C581	354721019	100 μ F, 6.3V, Elect.
C915, C916	3504286	12000 μ F, 63V, Elect.
C923	354761029	1000 μ F, 35V, Elect.
C924	354763319	330 μ F, 35V, Elect.
C927, C928	354741009	10 μ F, 16V, Elect.
C931	354741009	10 μ F, 16V, Elect.
C932, C933	354781019	100 μ F, 50V, Elect.
C936, C937	354741009	10 μ F, 16V, Elect.
C938	354781009	10 μ F, 50V, Elect.
C983, C984	354741009	10 μ F, 16V, Elect.

Resistors		
R393	5104288	N11RLC250KWT20Z, Balance
R409, R415	5104356	N14RLC100KWT20Z, Tone
R527, R528	443524734	47 kohm \pm 5%, 1/2W, Metal oxide
R535, R536	4500095	100 ohm \pm 5%, 1/4W, Metal
R537, R538	5210259	N06HR 2KBC, Trim
R543, R544	4500107	330 ohm \pm 5%, 1/4W, Metal
R545, R546	4000132	RGCS5 0.22 OHMK, Metal plate
R551, R552	453630824	8.2 ohm \pm 5%, 1W, Metal
R553, R554	443523924	3.9 kohm \pm 5%, 1/2W, Metal
R570	443522204	22 ohm \pm 5%, 1/2W, Metal oxide
R587, R588	4500001	BPR2FK 0.10 ohm, Metal plate
R923	4500055	2.2 ohm \pm 5%, 1/4W, Metal
R924	4500069	8.2 ohm \pm 5%, 1/4W, Metal
R930	4500079	22 ohm \pm 5%, 1/4W, Metal
R933	4500087	47 ohm \pm 5%, 1/4W, Metal

Relays		
RL591, RL592	25065339	NRL-2PSA-DC24-046

Pin Jacks		
P301-P303	25045458Y or	NPJ-6PDBL279 or
	25045300Y	NPJ-6PDBL159
P504	25045459Y or	NPJ-1PDBL280 or
	25045302	NPJ-1PDBL161

Plugs		
P304	25055405	NPLG-3P387
P611a	25055678	NPLG-8P634
P612a	25055649	NPLG-8P605
P613a	25055652	NPLG-14P608

Sockets		
P711a-P713a	25051046	NSCT-10P833

Wire holders		
JL261a	25051088	NSCT-4P875
JL331a	25051087	NSCT-3P874
JL333a	25051088	NSCT-4P875
JL354a	25051087	NSCT-3P874
JL811a	25051107	NSCT-3P894
JL812a	25051111	NSCT-7P898
JL912a	25051108	NSCT-4P895

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
JK13a	25051109	NSCT-5P896	L701-L703	233454K220	NCH-1452 220K
JK14a	25051107	NSCT-3P894			
P501	Terminals 25060125 or 25060125	NTM-8PDMN058 or NTM-8PDMN058	X701	Ceramic lock 3010163	CST4.19MGW
P521,P522	25060062	2P-5, WW terminal		Capacitors	
P916	Crimp ass'y 2069915360ULY		C701	3000075	0.047F, 5.5V, Super
D911a	Radiators		C702	375524744	0.47 μ F \pm 5%, 50V, Plastic
Q921a	27160227	RAD-076	C703	354721019	100 μ F, 6.3V, Elect.
	27160209	RAD-67	C704	355780109	1 μ F, 50V, Elect.
	838430107	3TTB+10S(BC), Self-tapping screw	C706	355780109	1 μ F, 50V, Elect.
	27141059Y	Plate, GND	C707	355780109	1 μ F, 50V, Elect.
			C709	355721019	100 μ F, 6.3V, Elect.
			C711	355721019	100 μ F, 6.3V, Elect.
			C726,C727	355741009	10 μ F, 16V, Elect.
POWER SECONDARY SUPPLY CIRCUIT PC BOARD					
(NAETC-5397-4/4A)					
CIRCUIT NO.	PAR NO.	DESCRIPTION			
Q961	Transistors		S701-S706	Switches	
Q962	221282	DTC144ES	S708-S712	25035652	NPS-111-S604
	2213640	DTC123JS	S714,S716	25035652	NPS-111-S604
			S738	25035652	NPS-111-S604
D961	Diode		P711b-P713b	Plugs	
	223163	1SS133		25055659	NPLG-10P615
C987,C988	Capacitors		JK111a	Wire holder	
	374731044	0.1 μ F, 100V, Plastic		25051089	NSCT-5P876
RL961,RL962	Relays		Q702a	Holder	
	25065503	NRL-1P10A-DC24-091		27190937AY	FL
F921a,F922a	Fuse holders		POWER PRIMARY SUPPLY PC BOARD (NAPS-5469-1/1A)		
	25050065	YSH403T	CIRCUIT NO. PART NO. DESCRIPTION		
JK121b	Wire holders		Q951	Transistors	
JK13b	25051107	NSCT-4P895		221282	DTC144ES
JK14b	25051109	NSCT-5P896	Q952	2213650	DTD113ZS
	25051107	NSCT-3P894			
A961	29360398	LABEL(FUSE) <C>	D951-D954	Diodes	
			D955	22380032	1SR139-100
				223163	1SS133
DISPLAY CIRCUIT PC BOARD (NADIS-5467-1/1A)					
			T902	Transformers	
			T902	2300670A	NPT-1111D <AH>
				2300671AY	NPT-1111P <C>
U701	Remote sensor		C901	Capacitor	
	24130010	HC-312	C952	3500191	DE7150F-103M AC400V/125V
Q702	FL tube			354742219	220 μ F, 16V, Elect.
	212143	FIP13QM8	R951	Resistor	
Q701	ICs			453530824	8.2 ohm, 1/2W, Metal
	22240950	MPD78042AGF-072	P901a	Plug	
Q703	Transistors			25055675	NPLG-2P631 <AH>
Q704-Q706	221282	DTC144ES	P902	Socket	
Q708	2213294	2SC1740S-R		25051124	NSCT-6P911 <AH>
	221282	DTC144ES	P902	25051125	NSCT-4P912 <C>
D701,Q702	Diodes		RL901	Relay	
D703	223163	1SS133		25065483	NRL-1P5A DC12-084
D704	224470913	MTZJ9.1C			
D707	223163	1SS133		Fuse holders	
D708	224470562	MTZJ5.6B	F901a	25050065	YSH403T <AH>
D709	223163	1SS133	F902a,F903a	25050065	YSH403T <C>
D710-D716	225292D	SEL4310G-D	F902a	25050065	YSH403T
D721	223163	1SS133			
	225291D	SEL4910D-D			

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
JL961a	Wire holder		Q606	22240795 or	NIU7311L or
	25051087	NSCT-3P874		22240398	TC9162N
	Cover		Q651	22240687 or	NIU9701D or
	27301216	SB-1925A, Capacitor <C>		22240686	M65830P
	Terminal		Q671	22240266	TC9213P
	25060092	NTM-1S33 <C>	Q673,Q674	22240247 or	BA15218N or
				22240293	NJM4558L-D
				Transistors	
VIDEO CIRCUIT PC BOARD (NAETC-5470-1)			Q453,Q454	2212524	2SK363-GR
CIRCUIT NO.	PART NO.	DESCRIPTION	Q455,Q456	2213284	2SC1740S-R
			Q457,Q458	2213354	2SA933S-R
			Q459,Q460	2213631	RN1241-A
			Q603,Q604	2213631	RN1241-A
Q251,Q252	2213284 or	2SC1740S-R or	Q675,Q676	2213631	RN1241-A
	2212115	2SC2458-GR			
Q253	222840661	4066B			
	Transistors		D451-D454	224470332	MTZJ3.3B
	2213284 or	2SC1740S-R or	D455-D464	223163	1SS133
	2212115	2SC2458-GR	D651	224470562	MTZJ5.6B
	222840661	4066B	D652,Q653	223163	1SS133
D251	223163	1SS133			
	Capacitors		X651	3010217	CST2.04MG040, Ceramic
	354721019	100 μ F, 6.3V, Elect.			
	354724719	470 μ F, 6.3V, Elect.			
	354721019	100 μ F, 6.3V, Elect.			
P251	Terminal		C432,C440	354741009	10 μ F, 16V, Elect.
	25045339Y	NPJ-4PDYE190	C451,C452	354744709	47 μ F, 16V, Elect.
JL261	Wire trap		C453-C458	354741019	100 μ F, 16V, Elect.
	25055625	NPLG-4P587	C459,C460	354741009	10 μ F, 16V, Elect.
			C461,C462	374721015	100pF, \pm 10%, 50V, Plastic
			C463,C464	354741019	100 μ F, 16V, Elect.
NAD LINK TERMINAL PC BOARD (NAETC-5472-1)			C465,C466	374721015	100pF, \pm 10%, 50V, Plastic
CIRCUIT NO.	PART NO.	DESCRIPTION	C467,C468	354741009	10 μ F, 16V, Elect.
			C469,C470	354780479	4.7 μ F, 50V, Elect.
P961	Jack		C471,C472	354741009	10 μ F, 16V, Elect.
	25045395	NPJ-2PDYE221	C601,C602	354780229	2.2 μ F, 50V, Elect.
JL711b	Wire trap		C605,C606	354741009	10 μ F, 16V, Elect.
	25055626	NPLG-5P588	C607-C610	354781099	0.1 μ F, 50V, Elect.
			C613,C614	374724734	0.047 μ F, \pm 5%, 50V, Plastic
			C615,C616	374722234	0.022 μ F, \pm 5%, 50V, Plastic
JL961b	Wire holder		C617-C620	354781099	0.1 μ F, 50V, Elect.
	25051087	NSCT-3P874	C621,C622	354780479	4.7 μ F, 50V, Elect.
HEADPHONE TERMINAL PC BOARD (NAETC-5473-1)			C623-C627	354782299	0.22 μ F, 50V, Elect.
CIRCUIT NO.	PART NO.	DESCRIPTION	C628	354741009	10 μ F, 16V, Elect.
			C629	354786899	0.68 μ F, 50V, Elect.
P503	Jack		C630	374724734	0.047 μ F, \pm 5%, 50V, Plastic
	25045255	YKB21-5009	C631	374725624	5600pF, \pm 5%, 50V, Plastic
TUNER TERMINAL PC BOARD (NAETC-5475-1/1A)			C632,C634	354780229	2.2 μ F, 50V, Elect.
			C635	354741019	100 μ F, 16V, Elect.
			C636-C641	354741009	10 μ F, 16V, Elect.
			C642	374724724	4700pF, \pm 5%, 50V, Plastic
P331	Jacks		C643	354741009	10 μ F, 16V, Elect.
	25045463 or	NPJ-2PDWH284 or	C644	391141007	10 μ F, 16V, Elect.
JL331b	25045360	NPJ-2PDWH206	C647-C650	354741009	10 μ F, 16V, Elect.
			C651	354780229	2.2 μ F, 50V, Elect.
			C653	374723924	3900pF, \pm 5%, 50V, Plastic
			C655	374726834	0.068 μ F, \pm 5%, 50V, Plastic
SURROUND CIRCUIT PC BOARD (NAAF-5476-1)			C656	354744709	47 μ F, 16V, Elect.
CIRCUIT NO.	PART NO.	DESCRIPTION	C657,C658	354781099	0.1 μ F, 50V, Elect.
			C659	374726834	0.068 μ F, \pm 5%, 50V, Plastic
Q451,Q452	22240250	NJM2068L-D	C660	374725624	5600pF, \pm 5%, 50V, Plastic
	22240247 or	BA15218N or	C661	374724724	4700pF, \pm 5%, 50V, Plastic
Q601	22240293	NJM4558L-D	C663,C665	354721019	100 μ F, 6.3V, Elect.
Q602	22240683 or	NJM2177L or	C666	375524744	0.47 μ F, \pm 5%, 50V, Plastic
	22240692	M69032P	C671,C672	354780229	2.2 μ F, 50V, Elect.
Q605	22240247 or	BA15218N or	C675,C676	354741009	10 μ F, 16V, Elect.
	22240293	NJM4558L-D	C677,C678	354780229	2.2 μ F, 50V, Elect.
			C679-C682	354741009	10 μ F, 16V, Elect.
			C684,C685	354741009	10 μ F, 16V, Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R441	5104347	N16RQL100KB725F
R489,R490	5210292	N06HR 10KBE, Trim

	Sockets	
P611b	25051127	NSCT-8P914
P612b	25050983Y	NSCT-8P770
P613b	25050986Y	NSCT-14P773

	Socket ass'y	
P621a	2000802AUL	NSAS-6P758

	Plug	
P622a	25055405	NPLG-3P387

	Wire holder	
JL351a	25051089	NSCT-5P876

CENTER AND REAR AMPLIFIER CIRCUIT PC BOARD (NAAF-5477-1/1A)

CIRCUIT NO. PART NO. DESCRIPTION

	Transistors	
Q801-Q804	2211733 or 2211732	2SC1845-E or 2SC1845-F
Q805,Q806	2213354	2SA933S-R
Q807,Q808	2211733 or 2211732	2SC1845-E or 2SC1845-F
Q809,Q810	2213284	2SC1740S-R
Q811,Q812	2211353	2SA949-O
Q813,Q814	2211633	2SC2229-O
Q815,Q816	2213284	2SC1740S-R
Q817,Q818	2203010	2SC5171
Q819,Q820	2203000	2SA1930
Q825,Q826	2211733 or 2211732	2SC1845-E or 2SC1845-F

	Diodes	
D805,D806	223163	1SS133
D811	223163	1SS133

	Coils	
L801,L802	2311765	S-1.3C

	Capacitors	
C801,C802	354741009	10 μ F, 16V, Elect.
C807	354742219	220 μ F, 16V, Elect.
C808	354744709	47 μ F, 16V, Elect.
C821,C822	374724734	0.047 μ F, \pm 5%, 50V, Plastic
C827,C828	374724734	0.047 μ F, \pm 5%, 50V, Plastic
C865-C870	354700109	1 μ F, 160V, Elect.
C871,C872	354774709	47 μ F, 63V, Elect.

	Resistors	
R826	443524734	47 k ohm, 1/2W, Metal oxide
R833,R834	4500081	27 ohm, 1/4W, Metal
R835,R836	4500095	100 ohm, 1/4W, Metal
R837	5215043	2KBC
R843,R844	4500107	330 ohm, 1/4W, Metal
R845	4000132	0.22 OHMK, Metal plate
R846	4000131	0.22 OHMK, Metal plate
R851,R852	453630824	8.2 ohm, 1W, Metal
R853,R854	443523924	3.9 kohm, 1/2W, Metal oxide
R865,R866	453530224	2.2 ohm, 1/2W, Metal
R867-R870	443522204	22 ohm, 1/2W, Metal oxide

	Plug	
P621b	25055234	NPLG-3P218

	Relay	
RL801	25065485	NRL-2P2A-DC24-086

CIRCUIT NO.	PART NO.	DESCRIPTION
	Wire trap	
JL811b	25050280	NSCT-3P108
JL812b	25050284	NSCT-7P112
	Terminal	
P801	25060234	NTM-6PDML156
P821	25060062	2P-5

EDP CRUCUIT PC BOARD (NAETC-5478-1) CIRCUIT NO. PART NO. DESCRIPTION

	Transistors	
Q351	2213284	2SC1740S-R
Q352	2213354	2SA933S-R
Q353	2213284	2SC1740S-R
Q354,Q355	2213354	2SA933S-R
Q357,Q358	2213284	2SC1740S-R
Q359-Q362	2213354	2SA933S-R
Q363,Q364	2213284	2SC1740S-R

	Diodes	
D351-D355	223163	1SS133
D356	224470512	MTZJ5.1B

	Capacitors	
C351	354741009	10 μ F, 16V, Elect.
C373,C374	354741019	100 μ F, 16V, Elect.

	Slide switch	
S351	25065286Y	NSS-22112

	Screw trim	
P356,P357	25065425	M3

	Wire trap	
JL351b	25055626	NPLG-5P588
JL353b	25055625	NPLG-4P587
JL354b	25055624	NPLG-3P586

CAUTION: Replacement for transistor of mark "*", if necessary,
must be made from the same beta group (HFE) as
the original type.

**NOTE: THE COMPONENTS IDENTIFIED BY MARK Δ
ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH
PART NUMBER SPECIFIED.**

ADJUSTMENT PROCEDURES

Preparation

1. Outputs

Connect the non-inductive type resistors of 8 ohms to the speaker terminals A unless otherwise noted.

2. Standard Knob Positions

Master Volume Control	Maximum
Bass Control	Center
Treble Control	Center
Balance Control	Center
Input Selector.....	CD
Tape 2 Monitor	Off
Muting	Off
Tone Defeat.....	Off
Speaker A.....	On
Speaker B.....	Off
Center Mode.....	Wide Band
Delay Time.....	20 ms
Center Level	0 dB
Rear Level	0 dB
Surround Mode	Off
CDR	Off
Soft Clipping	Off

IDLING CURRENT ADJUSTMENT

1. Connect the DC voltmeter to the terminals P521, P522 (VCT and IID) on the main circuit pc board, and P821 on the center and rear amp. pc board.

2. Adjust the trim resistors R537, R538 and R837 so that the indicator of voltmeter becomes $3.25\text{mV} \pm 0.25\text{mV}$.

NOTE: Adjust after switching on for 5 minutes. Set Volume knob to the minimum position.

CDR ADJUSTMENT

1. Set the volume to minimum position.
2. Connect the Dual Channel Voltmeter to test point (P304) on main pc board.
3. Set the function to "CD" position. Input the signal (1kHz-15dBV).
4. Turn "CDR" on, adjust the output level at "L ch" with "R489 on surround pc board" until it reaches "-11dBV".
5. Adjust the output level (both channel) with "R490" to "-11dBV $\pm 1.0\text{dBV}$ " on test point (P304) slowly & Precisely.
(The difference between "L ch" and "R ch" should be $0 \pm 0.5\text{dB}$.)

A horizontal number line with arrows at both ends. There are four major tick marks labeled 1, 2, 3, and 4 from left to right. The intervals between these tick marks are divided into three equal parts by smaller, unlabeled tick marks.





Pour une protection permanente, n'utiliser que des fusibles de même type.
Ce dernier est indiqué là où le présent symbol est apposé.

△



SCHEMATIC DIAGRAM

VOLTAGE CHARTS (ALL VOLTS)

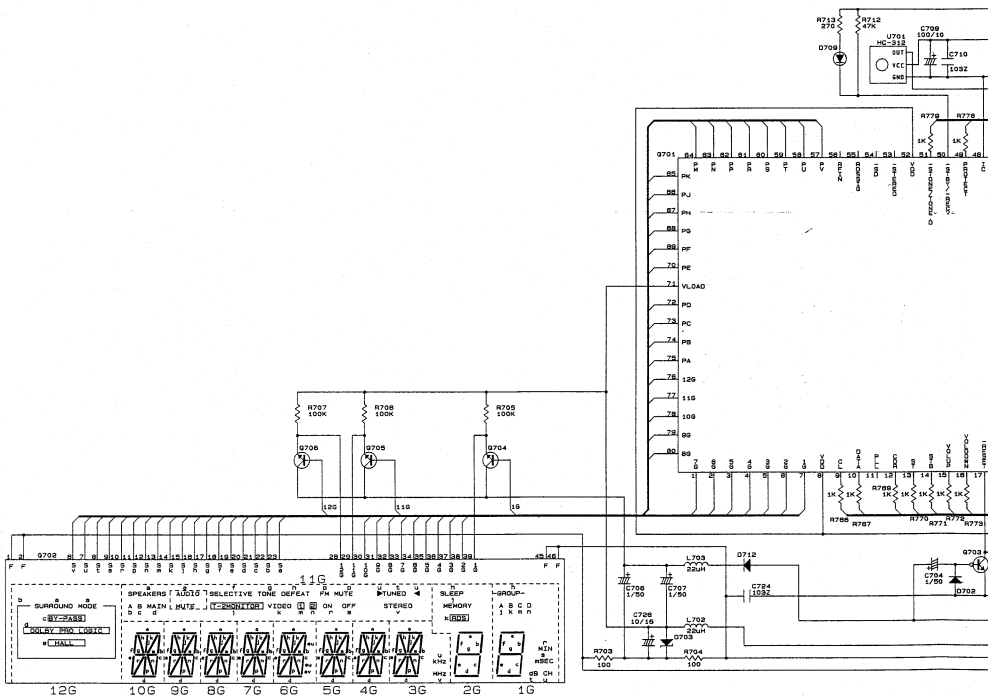
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Q451	0.0	0.0	0.0	-11.8	0.0	0.0	0.0	11.8						
Q601	0.0	0.0	0.0	-11.8	0.0	0.0	0.0	11.8						
Q502	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	0.0	11.0	3.4
No.	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.4	0.7	0.7	4.1	4.2	2.7
No.	29	30	31	32	33	34	35	36	37	38	39	40	41	42
	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	11.8	4.1	4.1	1.4	4.1	4.1
No.	43	44	45	46	47	48	49	50	51	52	53	54	55	56
	4.1	4.1	4.1	4.1	4.1	4.1	0.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Q605	0.0	0.0	0.0	-11.8	0.0	0.0	0.0	11.8						
Q606	-11.8	0.0	0.0	0.0	0.0	0.0	0.0	11.4	-0.9	11.8	0.0	0.0	0.0	0.0
No.	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	0.0	0.0	11.8	11.8	11.8	0.7	0.7	0.0	0.0	0.0	0.0	0.0	11.8	
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Q651	5.0	2.2	2.3	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5
No.	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	2.5	2.5	0.7	0.7	2.5	2.5	2.5	2.5	2.5	5.0				
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Q671	-11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No.	15	16												
	0.0	11.8												
No.	1	2	3	4	5	6	7	8						
Q673	0.0	0.0	0.0	-11.8	0.0	0.0	0.0	11.8						
Q674	0.0	0.0	0.0	-11.8	0.0	0.0	0.0	11.8						

VOLTAGE CHARTS (ALL VOLTS)

No.	1	2	3	4	5	6	7
Q233	5.5	5.5	5.5	1.1	0.0	0.0	0.0
Q301	0.0	0.0	0.0	-11.8	0.0	0.0	0.0
Q302	-11.8	0.0	0.0	0.0	0.0	0.0	0.0
No.	1	2	3	4	5	6	7
Q401	0.0	0.0	0.0	-11.8	0.0	0.0	0.0
Q402	0.0	0.0	0.0	-11.8	0.0	0.0	0.0
Q481	4.8	5.6	0.6	0.0	5.6	0.6	0.0
Q571	0.0	0.0	0.0	-11.8	0.0	0.0	0.0
Q221	26.2	0.0	11.8				
Q222	-27.2	0.0	-11.8				
Q223	25.9	0.0	5.6				

No.	E	C	B	No.	E	C	B
Q251	4.9	10.2	5.5	Q513	-43.9	-1.2	-45.1
Q252	4.9	10.2	5.5	Q515	-1.2	1.2	-0.1
Q407	11.8	-11.8	1.1	Q517	0.6	44.8	1.1
Q491	0.0	0.0	-11.5	Q519	-0.6	44.8	-1.1
Q492	0.0	0.0	-11.5	Q521	0.0	44.8	0.0
Q493	0.4	-11.5	0.0	Q523	0.0	44.8	-0.1
Q501	-0.6	44.0	0.0	Q525	0.0	44.5	0.0
Q503	-0.6	44.0	0.0	Q527	0.0	11.7	0.0
Q505	44.6	44.0	44.0	Q573	11.0	11.8	11.0
Q507	-43.9	-19.5	-43.9	Q575	0.0	0.0	-11.1
Q509	-44.5	-43.5	-43.9	Q576	0.0	0.0	-11.1
Q511	44.6	1.2	44.0	Q581	0.0	44.5	0.0

NADTS-5467-14



(ALL VOLTS)

4	5	6	7	8	9	10	11	12	13	14
5	-1.1	0.0	10.1	0.0	5.5	0.0	0.0	10.2	10.2	9.9
0	-11.8	0.0	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	19	20	21	22	23	24	25	26	27	28
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0
0	4	5	6	7	8	9	10	11	12	13
0	-11.8	0.0	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0
0	-11.8	0.0	0.0	0.0	11.8	0.0	0.0	0.0	0.0	0.0
6	0.0	5.6	0.6	5.6	4.8	0.0	0.0	0.0	0.0	0.0
0	-11.8	0.0	0.0	0.0	11.0	0.0	0.0	0.0	0.0	0.0
8										
9										
0										

No.	E	C	B	No.	E	C	B	No.	D	S	G
Q513	-43.9	-1.2	-43.3	Q582	0.0	44.5	0.0	Q403	0.0	0.0	-3.2
Q515	-1.2	1.2	-0.6	Q583	44.8	0.0	44.7	Q404	0.0	0.0	-3.2
Q517	0.6	44.8	1.2	Q584	0.0	44.5	0.0	Q405	0.0	0.0	-3.2
Q519	-0.6	-44.8	-1.2	Q591	0.0	0.0	3.6	Q406	0.0	0.0	-3.2
Q521	0.0	44.8	0.6	Q592	0.0	26.5	0.0				
Q523	0.0	44.8	-0.6	Q593	0.0	0.0	3.6				
Q525	0.0	44.5	0.0	Q594	-32.1	-39.8	-32.8				
Q527	0.0	11.7	0.4	Q595	3.1	13.0	4.8				
Q529	11.0	11.8	11.6	Q596	0.0	0.0	3.1				
Q535	0.0	0.0	-11.5	Q561	0.1	27.1	0.4				
Q576	0.0	0.0	-11.5	Q562	0.0	27.1	0.1				
Q581	0.0	44.5	0.0								

No.	E	C	B	No.	E	C	B	No.	E	C	B	No.	E	C	B
Q351	-2.0	11.8	2.6	Q453	0.0	11.8	0.6	Q807	-43.9	-19.5	-43.3	Q820	-0.6	-44.8	-1.2
Q352	-2.0	-11.8	-2.6	Q457	0.6	-11.8	0.0	Q808	-43.9	-19.5	-43.3	Q821	0.0	44.8	0.6
Q353	9.6	11.8	10.2	Q459	0.0	0.0	1.0	Q809	-44.3	-43.3	-43.9	Q822	0.0	44.8	0.6
Q354	-9.6	-11.8	-10.2	Q463	0.0	0.0	11.4	Q810	-44.3	-43.3	-43.9	Q823	0.0	-44.8	-0.6
Q355	0.0	-10.2	-0.6	Q464	0.0	0.0	-0.9	Q811	-44.3	-1.2	43.8	Q824	0.0	-44.8	-0.6
Q357	0.0	10.6	0.0	Q475	0.0	0.0	-11.5	Q812	44.4	1.2	43.8	Q825	0.0	44.5	0.0
Q358	0.0	10.6	0.0	Q476	0.0	0.0	-11.5	Q813	-43.9	-1.2	-43.3	Q826	0.0	44.5	0.0
Q359	44.8	1.4	44.2	Q801	-0.6	43.8	0.0	Q814	-43.9	-1.2	-43.3				
Q360	44.8	1.4	44.2	Q802	-0.6	43.8	0.0	Q815	-1.2	1.2	-0.6	No.	D	S	G
Q361	44.8	44.2	44.2	Q803	-0.6	43.8	0.0	Q816	-1.2	1.2	-0.6	Q453	1.7	1.7	0.0
Q362	44.8	44.2	44.2	Q804	-0.6	43.8	0.0	Q817	0.6	44.8	1.2				
Q363	0.0	11.8	0.6	Q805	44.4	43.8	43.8	Q818	0.6	44.8	1.2				
Q364	0.0	11.8	0.6	Q806	44.4	43.8	43.8	Q819	-0.6	-44.8	-1.2				

VOLTAGE CHARTS (ALL VOLTS)

No.	E	C	B
Q703	0.0	4.8	0.0
Q704	-29.4	5.0	-29.3
Q705	-29.4	5.0	-29.3
Q706	-29.4	5.0	-29.3
Q708	0.0	5.2	0.0

